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09/810,595	03/15/2001	Belford T. Coursey	MI22-1660	8140

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SPOKANE, WA 99201-3828

EXAMINER

HUYNH, YENNHU B

ART UNIT	PAPER NUMBER
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2813

DATE MAILED: 12/03/2002

12

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/810,595

Applicant(s)

COURSEY, BELFORD T.

Examiner

Yennhu B Huynh

Art Unit

2813

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 10 September 2002.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 26-37 and 48-53 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 26-37 and 48-53 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 8,9,10.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## **DETAILED ACTION**

This Office Action is in response to Amendment filed on 9/10/02.

### ***Election/Restrictions***

Applicant's election without traverse of claims 26-37 in Paper No. 6 is acknowledged.

### ***Specification***

The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

The following title is suggested: A memory Circuitry With Peripheral Area.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 26-28,31,33,34 & 36 are rejected under 35 U.S.C. 102(b) as being anticipated by Lane et al. (U.S. 5,998, 257)

Lane et al. at figs.1-14 in related art col. 1-10 disclose a memory circuitry device, which include:

Re. claims 26 & 33: a semiconductor substrate<sup>12</sup>; a plurality of word lines 14,16,18 &20 received over the semiconductor substrate; an insulating layer 44 over the wordlines and the substrate, the insulative layer having at least one well 46 formed therein, the well comprising a base received over the word lines, the well peripherally defining an outline of a memory array area 42, area peripheral to the well comprising memory peripheral circuitry area; a plurality of memory cell storage capacitors received within the well over the word lines (col. 4, lines 6-13), and peripheral circuitry with the peripheral circuitry area operatively configured to write to and read from the memory array (col.4,5 lines 48-16).

Re. claim 27: wherein the base is substantially planar (col. 4, lines 46-47).

-Re. claims 28 & 34: wherein the word lines have insulative caps 30 and the well base has lowest portion which is received above the caps.

Re. claims 31 & 36: wherein the insulative layer has a substantially planar outermost surface, and the capacitors have capacitor storage node electrodes having topmost surfaces received elevationally proximate the substantially outermost surface of the insulative layer (col.2, lines 27-39 & col.5, lines 43-62).

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 29,30,32,35,37 & 48-53 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lane et al. (U.S. 5,998,257).

Lane et al. disclose substantially all of claimed features. However, Lane et al. do not disclose wherein the insulative layer comprises SiO<sub>2</sub> or Si<sub>3</sub>N<sub>4</sub> (cl.48); and the height dimension constitutes a location which is remote on the substrate between the well base and tops of digit lines of word lines (cls. 30,32,35,37 & 49-53).

-Re. claim 48: It is well known to one having skilled in the art to have claimed for making the insulating layer includes SiO<sub>2</sub> or Si<sub>3</sub>N<sub>4</sub> material, because it is a conventional insulative material (Nishikawa et al., US. 6,087,261).

With respect to claims 30,32,35,37 & 49-53 the specified location of the elements are not patentably distinguishable over the art of record. Since it has been held that such placement would have involved routine experimentation in the art. As noted *In re Aller* 105 USPQ233, 255 (CCPA 1955), the selection of temperature and concentration would have been obvious.

"Normally, it is to expected that a change in temperature, or in range, concentration, cycles, thickness or dimension would be an unpatentable modification. Under some circumstance, however, changes such as these may be impart patentability to a process if the particular ranges claimed produce a new and unexpected result which is different in kind and not merely degree from the results of the prior art ... such ranges are termed "critical ranges and the applicant has the burden of proving such criticality ... More particularly, where the general conditions of a claim are disclosed in the prior art, it is not inventive to discover the optimum or workable ranges by routine experimentation." *In re Aller* 105 USPQ233, 255 (CCPA 1955). See also *In re Waite* 77 USPQ 586 (CCPA 1948); *In re Scherl* 70 USPQ 204 (CCPA 1946); *In re Irmischer* 66 USPQ 314 (CCPA 1945); *In re Norman* 66 USPQ 308 (CCPA 1945); *In re Swenson* 56 USPQ 372 (CPA 1942); *In re Sola* 25 USPQ 433 (CCPA 1935); *In re Dreyfus* 24 USPQ 52 (CCPA 1934).

### ***Response to Arguments***

Applicant's arguments filed 9/10/02 have been fully considered but they are not persuasive.

Contrary to the Applicant's argument in Remark is Lane et al. do not disclose:

- 1) a plurality of memory cell storage capacitors received within one well over the word line (p.5), and
- 2) define an outline of a memory array area (p.6)

The arguments have been carefully considered but do not overcome the rejection of record.

Applicant's attention is respectfully directed to Lane et al.

1) The opening 62,64 is particular label for each opening in a big opening. In the big opening (big well) a plurality of memory cell storage capacitors 62,64 formed over the word line (col.6, lines 14,15,fig. 14). In similar, the opening 46, 50 is particular labeled for each opening in a big opening and in which more than one capacitors are formed within the area (col.4, lines 26-29).

2) An outline of a memory array area includes a peripheral circuitry is defined by number 42 (fig.1, col.2, lines 13-26 and col.4, lines 6-13).

### ***Conclusion***

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).


A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Yennhu B. Huynh whose telephone number is 703-308-6110. The examiner can normally be reached on M-F 8.30AM-7.00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Carl Whitehead, Jr., can be reached 703-308-4940. The fax phone numbers for the organization where this application or proceeding is assigned are 703-308-7722 for regular communications and 703-308-7724 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0956.

YNBH,  
11/6/02

  
CARL WHITEHEAD, JR.  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2800